

REMARKS

After entry of this amendment, claims 1-8 and 10-24 are pending in the application. Claims 1 and 18-20 have been amended to more particularly point out and distinctly claim the subject matter which Applicants regard as the invention. By this Amendment, claim 9 is cancelled. Reconsideration of the application as amended is respectfully requested.

In the Office Action dated November 30, 2005, claims 1, 2, 5, 6, 11-17 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Boyd et al. (U.S. 5,799,661). It is respectfully submitted that the Boyd reference does not anticipate, teach, or suggest the invention recited in claims 1, 2, 5, 6, 11-17 and 24. The Boyd reference discloses a device for performing thoracoscopic cardiac procedures, specifically a device for picking up heart tissue to treat multivessel coronary artery disease. Col. 1, ll. 14-19. The device includes a vacuum suction heart retractor 190 having an elongated tubular shaft 191 and a suction cup-shaped manipulator 192 on the distal end. Col. 18, ll. 17-19. The surface area of the manipulator 192 allows a firm grip of the surface of the heart when a vacuum is applied to the interior 195 of the suction cup 192, without causing vacuum damage to the heart tissue. Col. 18, ll. 50-54. The interior surface 198 of the manipulator 192 is textured by a pattern of bumps 199 to create a high friction surface. Col. 18, l. 66-col. 19, l. 2. The specification discloses that the bumps can have a height of approximately 1 mm. Col. 19, ll. 4-5.

Claim 1 of the present invention discloses a vacuum gripper for suctioning work pieces. The device allows flat objects to be picked up and transported without the objects slipping when the surface of the object is oily. Specification, ¶2. The gripper includes a suction body having a contact surface and a microstructure projecting from the contact surface. The microstructure is formed of a plurality of elements having a length two to twenty times greater than the thickness of the elements. Although the Boyd reference discloses a suction device having a contact surface textured by bumps to create a high friction surface, the reference is

Date February 28, 2006

Reply to Office Action dated November 30, 2005

devoid of bumps having a length two to twenty times greater than the thickness of the bumps. Therefore, the Boyd reference does not anticipate, teach or suggest the invention as recited in independent claim 1 and claims 2, 5, 6, 11-17, and 24, which depend from claim 1. Accordingly, reconsideration of the Examiner's rejection of claims 1, 2, 5, 6, 11-17 and 24 as being anticipated by Boyd is respectfully requested.

Claim 18 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Reimann et al. (U.S. 6,203,083). It is respectfully submitted that the Reimann reference does not anticipate, teach, or suggest the invention recited in claim 18. The Reimann prior art reference discloses a vacuum gripper having a base body 2 and an elastomeric insert 3 comprising an annular bearing member 8 that is mounted in the base body 2. Col. 3, ll. 17-18. The base body 2 has a suction opening that is surrounded by the bearing member and projects above the surface of the base body. The suction body disclosed in Reimann is a base body that supports the elastomeric bearing member 8. The base body surrounds the bearing member on all sides, holding the bearing member securely in the position and preventing deformation of the bearing member, which in turn reduces that amount of the elastic deviation of the component being sucked on. Col. 1, ll. 46-64. The body must be sufficiently rigid such that the bearing member is held securely in place and is subjected to little deformation.

Claim 18 of the present invention discloses a method for producing a suction gripper having a flexible suction body. The suction body includes a contact surface and a microstructure projecting from the contact surface. The Reimann reference is devoid of a flexible suction body. Although the reference discloses a flexible insert 3 and bearing member 8 that is mounted in the base body, the reference is devoid of a flexible suction body. Therefore, the Reimann reference does not anticipate, teach, or suggest the invention recited in claim 18.

Reconsideration of the rejection is respectfully requested.

Claims 3, 4, 7-10, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Boyd et al (U.S. 5,799,661). The Examiner has failed to establish a *prima facie* case of obviousness because the Examiner has failed to cite a

Date February 28, 2006

Reply to Office Action dated November 30, 2005

reference or combination of references that produce an invention as defined in claims 3, 4, 7-10, 22, and 23, which include by dependency all of the features of claim 1. It is respectfully re-submitted that Boyd is devoid of a microstructure formed of elements having a length two to twenty times greater than the thickness of the elements as recited in claim 1. Applicants respectfully submit that the Boyd reference does not render obvious the present invention. Reconsideration of the Examiner's rejection of claims 3, 4, 7-10, 22, and 23 as being unpatentable over Boyd is respectfully requested.

Additionally, Applicants respectfully submit that the Boyd reference disclosed is not analogous art. The current invention discloses a suction gripping device for picking up and transporting work pieces with a smooth surface such as glass, metal, or plastic or painted, wet or oily surfaces (¶¶ 2 and 8). A person of ordinary skill in the art would not be motivated to look to a device for performing thoracoscopic cardiac procedures, specifically a device for picking up heart tissue to treat multivessel coronary artery disease (col. 1, ll. 14-19), as disclosed in the Boyd reference, for a solution for suction gripping an oily or slippery work piece.

The Examiner indicated that claims 19-21 were objected to as being dependant upon a rejected base claim, but would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Claims 19 and 20 now includes all the limitations of claim 18.

This after final amendment, which amends claim 1 to include the features of claim 9 and amends claims 19 and 20 to include the limitations of claim 18: (1) does not raise new issues that would require further consideration and/or search; (2) does not raise the issue of new matter since the proposed amendments have support in the originally filed application, including the specification, claims, and drawings; (3) does place the application in condition in better form for appeal by materially reducing and/or simplifying the issues for appeal; and/or (4) does not present additional claims without canceling a corresponding number of finally rejected claims.

Application Serial No. 10/767,641
Date February 28, 2006
Reply to Office Action dated November 30, 2005

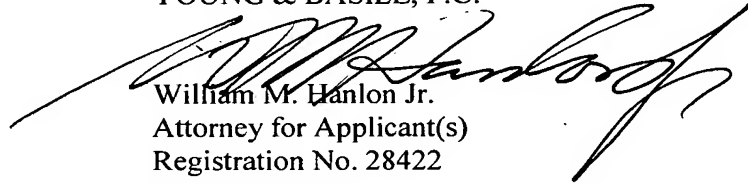
Page 9 of 10

It is respectfully submitted that this Amendment traverses and overcomes all of the Examiner's objections and rejections to the application as originally filed. It is respectfully submitted that this Amendment places the application and claims in a suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,

YOUNG & BASILE, P.C.



William M. Hanlon Jr.
Attorney for Applicant(s)
Registration No. 28422
(248) 649-3333

3001 West Big Beaver Rd., Suite 624
Troy, Michigan 48084-3107
Dated: February 28, 2006
WMH/TMS/jml